REMARKS

Claims 1, 2 and 6-46 are pending in this application. Claims 3, 4 and 5 have been canceled. Claim 46 is newly added. No new matter has been introduced.

The claims have been amended in accordance with the suggestions made by the Examiner in paragraphs 2-9 of the office action. Applicants thank the Examiner for the assistance provided.

Applicants believe the objections made to the claims in paragraphs 10-12 of the office action have been adequately addressed. Removal of the objection is respectfully requsted.

In the Office Action, claims 1 to 45 are rejected under 35 U.S.C. §102 or §103(a).

In the amended claims 1 and 45, a main image and a sub image are generated by determining a gradation processing condition so as to make the average gradient of the sub image be smaller than the average gradient of the main image. Consequently, in the main image for a diagnosis purpose, sufficient contrast can be given to the image diagnosis of lesion shadow. Moreover, in the sub image for a reference purpose, the whole image can be fitted into a density range within which the image can easily be observed. Thus, the location relation between a subject and an annotation can be easily expressed (See page 8 lines 9 to 25, and page 53 line 4 to page 60 line 9 of the specification).

Further, in the new claim 46, a main image and a sub image are generated by determining a gradation processing condition so as to make the average gradient of the sub image have a sign value opposite to a value of the average gradient of the main

image. Consequently, sufficient contrast can be given to the image diagnosis of lesion shadow. Moreover, in the sub image for reference purpose, black and white of the image is inverted. Then, the boundary between a subject and its background is shown with density to be observed easily, and the location relation between the subject and annotation can be easily expressed (See page 9 lines I to 17, and page 53 line 4 to page 60 line 9 of the specification).

On the other hand, the cited references do not disclose nor suggest the above features. In particular, in Kim (USP. 5,963,665) which is cited in order to reject the claims 4 and 5, it is only disclosed that the contrast of the image is enhanced by using mean-separate histogram equalization (MSHE) (See BACKGROUND OF THE INVENTION).

In detail, in Kim, the input image is divided into two sub-image groups $\{X\}_L$ and $\{X\}_u$ based on the mean level X_m of the image, a cumulative density function (CDF) for each subimage is calculated and the respective sub-images $\{X\}_L$ and $\{X\}_u$ are independently histogram-equalized by mapping the samples of $\{X\}_L$ into $(0, X_m)$ and the samples of $\{X\}_u$ into (X_{m+1}, X_{L-1}), respectively, according to the CDFs (See column 4 lines 3 to 53).

However, in Kim, it is not disclosed that the gradation processing conditions are determined so as to make the average gradient of the sub image for a reference purpose be smaller than the average gradient of the main image for a diagnosis purpose or a gradation processing condition is determined so as to make the average gradient of the sub image have a sign value opposite to a value of the average gradient of the main

image.

Therefore, Applicants respectfully believed that the present application is allowable.

In view of the above remarks, Applicant respectfully requests withdrawal of the rejection.

Since all claims are in a condition for allowance, please issue a Notice of Allowability.

Should the Examiner have any questions regarding this response or comments that would move the case towards allowance, the Examiner is invited to call the undersigned attorney of record.

Respectfully submitted,

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